

**Microplate Thermal Shift Assay Apparatus for Ligand Development and Multi-Variable Protein Chemistry Optimization**

*Abstract*

5        The present invention provides an assay apparatus for that includes a temperature adjusting means for simultaneously heating a plurality of samples, and a receiving means for receiving spectral emission from the samples while the samples are being heated. In further aspects of the invention, the receiving means can be configured to receive fluorescent emission, ultraviolet light, and visible light. The receiving means can be configured to receive spectral emission from the samples in a variety of ways, e.g., one sample at a time, simultaneously from more than one sample, or simultaneously from all of the samples. The temperature adjusting means can be configured with a temperature controller for changing temperature in accordance with a pre-determined profile.